	Questions	JPL Response
1	In Exhibit I, paragraph 6.16.1, page 26, Cross Track Pointing, a requirement for cross track point +/- 30 degrees is listed. How often is this required? How fast does the maneuver need to be accomplished, including settling time? It also requests two maneuvers per orbit. How often is this required? Every orbit, twice a year, etc.	The orbiter shall be capable of pointing to up to 20 targets per day. Targets may be located up to 30 degress off nadir in the cross-track direction. The orbiter shall be capable of executing 2000 of these off-nadir (cross track) targeting maneuvers before the end of calendar year 2010.
2	Reference Exhibit I, paragraph 5.9.8, page 17. The required performance is given in BER, however 810-005 207 uses frame error rate as the link metric when turbo codes are employed. What FER is required?	Using an 8920 bit frame size, a Frame Error Rate of 1E-5 yields equivalent throughput to the 1E-6 BER specified.
3	We understand that a Red Team Review Report was issued in the June 2000 timeframe on the Mars01 (Oddessy) Mission. Could we please have a copy of the report or could you direct us to where we might obtain a copy?	The Red Team Report for Mars01 will not be made available.
4	RFP Requirement (pp 5, 6-6): "The Contractor has limited freedom to adjust the ATLO start and KSC shipment dates (and associated reviews) in the proposal if this reduces the overall program cost and/or risk. Justification for any proposed changes must be provided as part of the submitted Phase C/D Implementation Plan." Question/Comment: What are JPL's reference dates for the start of ATLO and KSC shipment? Recommendation: None.	This information about reviews is provided in JPL D-20453, MRO Project Review Plan, Table 5. Milestones are shown in JPL D-20380, MRO Risk Management Plan, Figure 3.

	Questions	JPL Response
5	We recognize that during our one-on-one discussions we inquired into teaming with JPL and that your response was that this was not possible. We would like however to approach some of the technical divisions for support as merchant suppliers (i.e., subcontractors). Would such contact be allowed under the guidelines of the MRO acquisition?	No. JPL technical divisions may not contribute to technical proposals. JPL products and services may not be considered in your proposals except for the GFP, as listed in Exhibit V. X2000 hardware, as discussed at the Bidder's conference, may be considered for use in your proposal and udated contact information is available on the website. Should the proposer use X2000 hardware, the cost should be identifed as a line item in the proposal.
6	Exhibit I, 6.10 "Time Services" requires the orbiter to broadcast orbiter time to the payloads. Do the science instruments need equator crossing time?	Exhibit I, 5.5 "Autonomous Operations" requires ephemeris relative commanding. This shall include the capability of the Orbiter to provide any and all payloads with time references of some ephemeris relative events in every orbit so that payload sequences may also contain ephemeris relative commands. Providing ascending node equator crossing time is one such implementation.
7	Reference: MRO Final RFP, Exhibit V, GFP List 1. The TWTA has its own power supply. How is the required 182 W of DC power divided between the TWTA and its power supply? What are the dimensions of the TWTA and the power supply?	Of the expected 182W of DC power used by the TWTA, approximately 90 to 95% is supplied to the Traveling Wave Tube (TWT) itself and the remaining 5 to 10% is dissipated in the High Voltage Power Supply (HVPS). The dimensions of the TWT and HVPS are provided on the web site as an Exhibit II reference document (xbandicd.pdf). The dimensions of the TWT are approximately 38 cm(l) x 7 cm(w) x 10 cm(h) [including the HV cable bend] while the dimensions of the HVPS are approximately 27 cm(l) x 9 cm(w) x 11 cm(h).

	Questions	JPL Response
8	Reference: MRO Final RFP, Exhibit V, GFP List 1. Does the TWTA have a 'power back-off' capability'? If so, what is the range of output power available? How does the required DC power change vs. output power?	In general, you may "back-off" the drive (I.e. reduce theTWTA input drive power), thereby reducing both the RF output power and required DC power, but it is not recommended or expected that the TWTA will be operated at less than full-saturation.
9	Reference: MRO Final RFP, Exhibit V, GFP List 1. Is there a 'standby' mode, where some DC power is used to keep the TWTA ready to transmit? If so, what is the needed DC power?	The TWTA has a 'standby' mode where the heater is powered and the high-voltage is disabled. It is expected that while in 'standby' mode, the TWTA will consume approximately 10 to 15W of DC power.
10	Reference: MRO Final RFP, Exhibit V, GFP List 1. What is the TWTA response time from a cold start (-20C), and from a 'warm start' (if it has a 'standby' capability)?	The response time from STAND-BY to ON is on the order of tens of milli-seconds. Once up, the RF output may undergo a slight settling (0.1 to 0.2dB) as the thermal time constants of the TWT settle out and the internal temperatures stabilize; this may take 10 to 20 minutes. This STAND-BY to ON time is independent of baseplate temperature, as is the settling time associated with internal thermal time constants. From a true cold start (TWTA completely off, HV off, RF off, heater cold), JPL normally specifies 300 seconds to allow the heater to stabilize to temperature before the TWTA is considered to be in a STAND-BY condition and is ready for high voltage and RF.

	Questions	JPL Response
11	RFP Addendum No. 2 The answer to this question appears to change paragraph 3.1.2.5 of the RFP instructions and would cause tabs and cover pages containing no proposal material as well as acronym lists, tables of contents, and other pages containing no “substantive evaluatable information” to be counted in the 120 page limitation. We respectfully request the answer to this question be re-evaluated in the interest of providing pages that identify, label, and improve the readability and organization of the proposal and that do not have to be allocated at the expense of “substantive evaluatable information.”	Tabs and dividers should not be numbered and do not fall within the 120 page count limitation